

# **An Introduction to Basic Soil Science**

**May 15 and 16, 2007**

**Virginia Transportation Research Council, Charlottesville**

Sponsored By:

***Virginia Association of Professional Soil Scientists (VAPSS)***  
***Virginia Tech Department of Crop and Soil Environmental Sciences***

This intensive two-day short course focuses upon understanding soil physical, chemical and morphological properties in natural and managed landscapes. The course will stress relationships among basic soil properties, water quality and various land use issues. Day one will focus upon understanding soil formation, morphology and other properties essential to managing soils for various uses. Day two will stress practical applications of soil science including understanding and utilizing soil maps, dealing with problem soils (acid sulfate and urban), soil properties important for waste disposal, and wetland soil related issues.

**Instructors: *W. Lee Daniels and others***

**W. Lee Daniels** is Professor of Soil Environmental Science at Virginia Tech and has taught basic soils, geomorphology, and related soil-environmental courses for over 20 years. His extensive research and outreach programs include mined land reclamation, wetland restoration, land-application of wastes, right-of-way management, and manufactured soils. Dr. Daniels has cooperated in research-demonstration programs with Australia, China, Brazil and Poland. Other faculty from Virginia Tech will assist.

**Location, Fees and CEUs:**

The course will be offered at the Virginia Transportation Research Council, 530 Edgemont Rd, Charlottesville. 434-293-1900. The TRC building is near the UVA football stadium. Directions can be found at <http://vtrc.virginiadot.org/MAP.aspx>. Contact Sue Brown (see below) for lodging information.

The fee for the two-day short course is \$200 which includes the mandatory CEU fees (\$40) to Virginia Tech for issuance of 1.6 CEUs, two coffee/snack breaks each day, and duplication of hard copy (black & white) and CD (color) versions of all teaching materials and slides. Registration deadline is May 8. Registration will be limited to 50 attendees.

**For Further Information:**

Sue Brown – 540-231-5741 Fax: -7630 – [suebrown@vt.edu](mailto:suebrown@vt.edu);  
W. Lee Daniels – 540-231-7175 – [wdaniels@vt.edu](mailto:wdaniels@vt.edu)

## **May 15 - Basic Soil Science**

<b><u>Time</u></b>	<b><u>Topic</u></b>
8:00 am	Registration and Coffee
8:30 am	Introduction to Soils and Soil Forming Factors
9:00 am	Basic Soil Morphology; Profiles and Horizons
10:00 am	Break
10:15 am	Virginia Soil - Parent Material – Geologic Relationships
11:45	Lunch (on your own)
1:00 pm	Soil Physical Properties – Texture/Structure/Density
2:15 pm	Soil Water Relations - Basics
3:00 pm	Break
3:15 pm	How Water and Solutes Move in Soils
4:00 pm	Soil Mineralogy and Sources of Charge
5:00 pm	Adjourn

## **May 16 – Applications and Interpretation of Soil Properties**

<b><u>Time</u></b>	<b><u>Topic</u></b>
8:00 am	Coffee and Conversation
8:30 am	Soil Chemical Properties – Charge/Acidity/Fertility
9:45 am	Soil Biology and Organisms
10:15 am	Break
10:30 am	Soil Redox Process and Soil Color Patterns
11:00 am	Basics of Soil Classification
11:45	Lunch (on your own)
1:00 pm	Understanding Soil Maps
2:00 pm	Acid-Sulfate, Urban and Other Problem Soils
3:00 pm	Break
3:15 pm	Soils Issues in Revegetation and Constructed Wetlands
4:00 pm	Interpreting Soil Morphology for Waste Disposal & Application
5:00 pm	Adjourn

**Registration Form**

**VAPSS and Virginia Tech**

**May 15 and 16, 2007**

**An Introduction to Basic Soil Science  
1.6 CEUs**

**PLEASE PRINT CLEARLY OR TYPE:**

**Name** \_\_\_\_\_

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**Fax** \_\_\_\_\_

**Address** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**City** \_\_\_\_\_

**State** \_\_\_\_\_ **Zip** \_\_\_\_\_

**Amount enclosed \$** 200<sup>00</sup>

Registration deadline is May 8<sup>th</sup>. Registration maximum is limited to 50 attendees.  
**Contact Sue Brown to pay by credit card.** Payment must be made prior to the meeting to assure space.

**Make checks payable to VAPSS**

**Mail check with registration form to:**

**Sue Brown  
VAPSS  
Virginia Tech/CSES  
238 Smyth Hall - 0404  
Blacksburg VA 24061**